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ABSTRACT

An analysis of relative clauses in Navajo looks at a paradox that is rooted in the assumption that in Navajo, as in English, argument positions not occupied by some free lexical item must be occupied categorically by an EC. It examines patterns of and constraints on nominals with relation to the relative clause, theory concerning argumental pronouns, the syntactic status of nominals, and the internal syntax of relatives. It is concluded that Navajo relatives are neither "headless" nor "internally headed" but have overt pronominal heads, are adjuncts to main clause pronouns, and create no problems for Binding theory or the 0-criterion. (MSE)

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On Resolving a Paradox in the Analysis of Navajo Syntax*

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Navajo relative clauses correspond in structure to a main clause plus a relativizing enclitic. Nominals may be freely omitted; the rich inflectional morphology of the verb marks both subjects and objects, and Navajo is usually described as a "pro-drop" language. The relativizing enclitics belong to the set of determiners which also attach to simple nouns; in relative clauses, they attach to the clause final verb, creating a referring expression.

1) a. 'ashkii 'at'eed yiyiiɣtsa
boy girl 30:3S:saw
The boy saw the girl.

b. yiyiiɣtsa
30:3S:saw
He/she saw him/her.

2) a. 'ashkii 'at'eed yiyiiɣtsa-nee
boy girl 30:3S:saw-REL
The boy who saw the girl.

b. yiyiiɣtsa-nee
30:3S:saw-REL
The one that he/she saw.

Platero (1974) pointed out that a temporal adverb may appear in sentence initial position and have scope over a relative clause, and not over a following main clause, because of a difference in aspect between the relativized and matrix verbs.

3) 'adaadaa 'ashkii 'at'eed yiyiiɣtsa-nee yidoots'os
yesterday boy girl 30:3S:saw-REL 30:3S:will kiss
The boy who saw the girl yesterday will kiss her.

The presence of adaadaa shows that the noun 'ashkii is a constituent of the relative clause, and cannot be a constituent of the main clause. Evidence of this kind, plus the fact that nominals may be freely "missing", have led some linguists to call Navajo relative clauses "headless" or "internally headed". I will return to this point in a moment. What I want to show now is that examples like (3) present problems for an analysis of Navajo that assumes that the argument positions in the Navajo clause are filled by free lexical items -- NPs. In the gloss given for (3), there is co-reference between the arguments of the main and relativized verbs. The following constraint applies to nominals in Navajo sentences, both simple and complex:[1]

4) Disjoint nominals must be disjoint in reference.

Thus the nouns 'ashkii and 'at'eed cannot be repeated in the main clause in the sentence given in (3), as shown in (5).

5) 'adaadaa 'ashkii 'at'eed yiyiiɣtsa-nee *('ashkii) *('at'eed) yidoots'os

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Any nominal following the relative clause must be taken as a constituent of the main clause.

6) 'adaaníídáá 'ashkii 'at'éed yiyiiłsą́-nę́ę 'asdzáán yidoots'ǫs
yesterday boy girl 3O:3S:saw-REL woman 3O:3S: will kiss
The boy who saw the girl yesterday will kiss the woman.

In (6), the nouns 'at'éed and 'asdzáán are necessarily disjoint in reference. If the speaker does not intend that there be coreference between some argument of the main and relativized verbs, he can also mark disjoint reference by the use of the "fourth" person pronominal prefixes.

7) 'adaaníídáá 'ashkii 'at'éed yiyiiłtsą́-nę́ę hadoots'ǫs
40:3S: will kiss
The boy who saw the girl yesterday will kiss that person.

8) 'adaaníídáá 'ashkii 'at'éed yiyiiłtsą́-nę́ę jidoots'ǫs
30:4S: will kiss
That person will kiss the boy who saw the girl yesterday.

Example (7) shows the fourth person object pronoun, and Example (8) shows the fourth person subject pronoun. The fourth person in Navajo is used for speaking of persons who are not identified by name, for reasons of politeness or the like, and for marking disjoint reference across clauses or sentences.

Now if we assume either deletion under identity or "pro-drop", we have ECs in the main clause binding NPs in the relative clause, a violation of Condition C of the Binding Conditions, which states that a Referring Expression must be free. We might take the entire "headless" or "internally headed" relative to be a constituent of the main clause, and thus to receive the agent Ø-role of the matrix verb, but examples like (9) show that this is not the case.

9) 'adaaníídáá 'ashkii 'at'éed yiyiiłtsą́-nę́ę yiskáago yidoots'ǫs
tomorrow 3O:3S:will kiss
The boy who saw the girl yesterday will kiss her tomorrow.

In this example, the temporal adverb yiskáago has scope over the entire main clause, and the relative clause is outside its scope. And in any case, the patient Ø-role of the matrix verb cannot be discharged if there is no EC in the main clause corresponding to the object argument of the verb yidoots'ǫs. Thus, without empty categories upstairs, we have a violation of the Ø-criterion. There are problems when we assume ECs, and problems when we do not.

The paradox is rooted in the assumption that in Navajo, as in English, argument positions that are not occupied by some free lexical item must be occupied "categorially" by an EC.

Chomsky (1982) in speaking of "polysynthetic" languages, observes "It could be that there really is a rich theory of morphology which is syntactic in character". Many linguists working on morphologically rich languages have recently argued that syntactic rules in these languages need to make reference to parts of words (Muysken, 1981; Farmer, 1984; Baker, 1985; Sadock, 1980, Woodbury and Sadock, 1986; and others).

In particular, some of us have argued that the person marking affixes and clitics commonly seen in these languages are fully referential pronouns that occupy argument positions (Jelinek, 1983, 1984, 1985; Mithun, 1985; Rood, 1986; Bresnan and Mchombo, 1987; Willie, in press). If we take the position that the person marking prefixes on the Navajo verb are not "agreement", but incorporated pronouns that are argumental in status, we have no problems with Condition C or the Ø-criterion. Where there is coreference across clauses, there is coindexing of these argumental pronouns. By definition there is coreference between some argument of a relativized verb and a main clause verb, and the Navajo use of the fourth person to mark arguments disjoint in reference insures that the preferred (or only) interpretation of a complex sentence with third person arguments marks coreference of these arguments.[2]

The point that needs clarification is the syntactic status of the nominals in Navajo sentences; if they aren't arguments, what are they? The position I have argued for in recent work is that they are adjuncts, like relative clauses. In fact, the syntax of nominals and relatives in Navajo is exactly parallel.

10) a. yicha
3S:cry
He/she is crying.

b. yiztaɣ-ęę yicha
3O:3S:kicked-REL 3S:cry
The one that he/she kicked is crying.

c. 'ashkii yicha
boy 3S:cry
The boy is crying.

d. 'ashkii yiztaɣ-ęę yicha
boy 3O:3S:kicked 3S:cry
The boy that he/she kicked is crying.

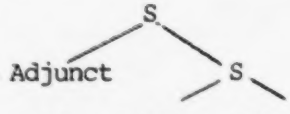
In keeping with their non-argumental status, Navajo nominals (including the free pronouns that are used for contrastive emphasis) do not mark case; nor, with a few exceptions, do they mark number. In contrast, the pronominal prefixes mark case, and singular, dual and plural number. Nominals are adjoined to aid in reference and 1, 2 and 4 person exclude nominal adjuncts, being maximally referential.

Navajo nouns and relatives are both adjuncts to a pronominal argument head, and an adjunct does not change the category of the element to which it is adjoined.

11) a.

Adargumental Adjunct

b.



Adsentential Adjunct

The relationship between an adjunct and its head is that of predication. Adargumental adjuncts include English relative clauses, and nouns in apposition; adsentential adjuncts include topics and temporal clauses. Relative clauses in some languages are both adargumental (in function) and adsentential (in syntactic structure). There are the adjoined relative clauses such as Hale (1976) has identified in the Pama-Nyungan languages of Australia; and this is the kind of relative clause found in Navajo. Navajo nouns and relatives adjoin to a pronominal argument to form a complex constituent that has argumental status; some of these complex constituents are discontinuous in syntax. The linking rules for nominal adjunction

consist of a set of simple algorithms referring to word order and direct or inverse case marked on the verb (Sandoval and Jelinek, in press; Willie, in press).

When no adjunct is adjoined, nothing is "missing" and there is no empty category, since the adjunct in and of itself cannot occupy an argument position, without the pronominal "head" to which it is adjoined. A pronominal argument without an adjunct has argumental status and takes a Ø-role; an adjunct alone cannot do either one of these things, and can be neither bound or governed.

I have defined the external syntax of Navajo relatives. Now I would like to consider their internal syntax, and return to the question of whether they are "headless" or "internally headed". Relative clauses of this kind are typical of Pronominal Argument languages (Jelinek, 1987). Following Willie (in press), I take the relativizing enclitic to be the pronominal head of the relative. The enclitic serves to build a referring expression from a predicate/argument structure, and corresponds nicely to the logician's iota operator. Navajo relative clauses as a whole are coreferential with one of the arguments of the relativized verb, and may be classified accordingly.

12) a. yáá/ti'-yęę yidloh — Subject-headed
3S:spoke-REL 3S:laugh — ιx(Fx)
The one who spoke, he is laughing.

b. shizts'ǫs-yęę yidloh — Subject-headed
1O:3S:kissed-REL 3S:laugh — ιx(Fx,y)
The one who kissed me, he is laughing.

c. sáts'ǫs-yęę yidloh — Object-headed
3O:1S:kissed-REL 3S:laugh — ιy(Fx,y)
The one that I kissed, he is laughing.

In these examples, the relativizing enclitic binds the third person pronominal head of the relativized verb.[3] The relative, like any other nominal, must be an adjunct to one of the pronominal arguments of the main clause. In sum, Navajo relatives are neither "headless" nor "internally headed" but have overt pronominal heads, are adjuncts to main clause pronouns, and create no problems for Binding theory or the Ø-criterion.

The purpose of this paper is not to point out that Navajo is not like English, nor to claim that the principles of Government and Binding are faulty. On the contrary, the purpose is to demonstrate uniformity underlying typological diversity. Nothing in the GB framework requires that a language have Empty Categories, and one of the arguments originally advanced in support of ECs was that at the level of Logical Form, all clause types have a fully realized argument structure. The fact that a good many Pronominal Argument languages, including Navajo, have fully realized argument structures in all clause types in the syntax should not surprise us.

Notes

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[1]Emphatic pronouns in adjunction to reflexives are excluded.

[2]Some Navajo speakers (including Platero) accept the following interpretation of Exp. (3):

i) The boy who saw the girl$_i$ yesterday will kiss him/her$_j$.

For Willie, only the reading given in (3) is acceptable, since the fourth person must be used if there is disjoint reference.

[3]If all the arguments of a relative clause are third person, the yi-/bi- alternation is used to show which argument is the head (Jelinek, 1987; Sandoval and Jelinek, in press).

i)	yiztaɣ-ee	y(Fx,y)	
	the one he/she kicked		
ii)	biztaɣ-ee	x(Fx,y)	
	the one who kicked	him/her	

The bi- prefix marks a construction as Inverse (Willie, in press).

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